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Issues and Planning for Local Communities

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Thank you for the opportunity to draw attention to the importance of input from governments, Non Government Organisations, special interest groups and communities when developing solutions for the capture, processing and containment of carbon dioxide emissions from fossil fuels. The task is indeed a challenge for the industry, from an economic, practical, environmental and social perspective.

Introduction

Communities today have access to a vast reservoir of knowledge and in the main, are very adept at using that knowledge to help form opinions on development. The internet gives the community access to all Australian legislation, world opinion and commentary together with a vehicle to disseminate their own opinion to the world. Significantly, it also gives special interest groups rapid access to case studies and strategies from compatriots in other states and countries.

Engaging a community and special interest groups in the development of a project during the planning process is, therefore essential to the success of the project.

The Technology Status Report on Solutions for the 21st Century, Zero Emissions Technologies for Fossil Fuels, released in May 2002, highlights that fossil fuel as the world's major energy source will be with us for a very long time. The Report details the current position with a range of approaches to the capture and securing of CO_2. All the work being done involves some form of transport and storage.

I have confined my address therefore to the impacts on communities potentially generated by carbon dioxide geo-sequestration and terrestrial sequestration from a planning perspective where that development extends beyond the boundaries of the production source. Naturally, it has an Australian flavour but many of the principles apply elsewhere.

The Legal Position to Carry out A Sequestration Project

Firstly I would make some observations about legislation.

Government legislation is the key to the control and management of the future of CO_2. In Australia, the Commonwealth and States have defined CO_2 in Petroleum legislation. Offshore legislation is basically common to the Commonwealth, States and Territories although Onshore Petroleum legislation does not appear to have that same commonality. Permitting injection of CO_2 (under the petroleum definition) into natural reservoirs is also common although some States' legislation has a codicil subjecting the definition to future recovery or, injection is permitted only adjacent to the production source. The lack of commonality of onshore legislation across the country is, itself, a dilemma. However, at issue here is that legislation, be it environmental, contamination or petroleum legislation, has not envisaged the sequestration of CO_2 for long periods, hundreds, perhaps thousands of years.

Action, I believe, is in progress by the Western Australia Government encouraging other Australian jurisdictions to develop suitable specific legislation and regulations to manage carbon dioxide handling, injection and storage prior to specific proposals being granted approval. I would envisage specific legislation being canvassed in the public arena prior to its adoption and in doing so commencing the debate and information exchange on the various processes being developed for the future of CO_2. In other words, it will be the legislation which will set the ground rules by which the public can participate in the consultative process and by which a development has security.

I make the point here that it must be a priority for the industry to closely work with the legislators to see that appropriate legislation permits development while giving comfort to those charged with responsibility for the legislation that they can defend with confidence, the new technology that surrounds the future of CO_2. Now, I am sure that it is happening, but it doesn't hurt to reinforce the point.

Then, of course there are planning instruments created under Environmental legislation, be they State Plans, Regional Plans or Local Plans which control development. State Plans bring into play issues such as hazard assessment, koala habit and native vegetation conservation, Regional Plans tend to be more issue specific while Local Plans give the detail on permissible development.

Emission Source

Firstly, to the principle sources of emission.

In Australia, many of our coal fired power stations sit close to coal resources and not too distant from the coast. And it is along the coastal fringe that the majority of Australians live. Construction of infrastructure at the production sources of CO_2 may not present too much of a difficulty from an environmental or social impact perspective. Transportation and containment of CO_2, however is a totally different issue.

Transport

Transportation of large volumes of CO_2 is limited by economics to pipelines, which present their own special problems.

Imagine if you will, the task of negotiating easements for a high-pressure pipeline from the source to a remote injecting point. Again, it may be that specific legislation is required to utilize the powers of government for acquisition, returning the infrastructure to the developer upon commencement of operation.

Conduits carrying “chemicals”, particularly under high pressure, raises an air of uncertainty in the community’s mind. The developer must, therefore be forearmed with sound reasoning to allay community fears of the “what if..” syndrome and be prepared to openly discuss plans with the community at a very non-technical level. It’s the simple matters that can cause grief. Crossing a creek with a pipeline will invariably involve the Environment Protection Authority, the Water Act, the National Parks and Wild Life Act and very importantly (particularly in NSW), the Fisheries Act. In addition, the community may have a Local Catchment Management Committee and a Field Naturalist Society who will also want to be involved. The significance of Native Title and Heritage areas be it local, State National or World, must also be at the forefront of planning. It all takes time, resources and people within the developer’s organisation who have a passion for the environment, are able to relate to the fears of simple people and above all, who are good communicators. There is a host of legislation covering environmental protection and stiff penalties for any breaches.

Compensation for access will require careful management and a long lead-time to avoid construction delays. Liability for the protection of the pipe infrastructure from accidental damage by the public will also require addressing. Local governments will need to develop consent conditions on all development by a landowner that is constructed adjacent to or impacts on a pipeline, to protect it. Thus it is not a case of bury and forget.

Terrestrial Sequestration

Many town-planning instruments now regulate intensive agriculture with those controls extending to private forestation. Much of the regulation results from the impact on traditional agriculture and the subdivision of prime agricultural land. In the case of forests, traditionally it is transport of a future harvest and where the raw material will be processed that is closely assessed. A task for terrestrial sequestration will be to articulate to the community how the forest or intensive agriculture is to be managed. Of particular concern will be the impact on ground water and on whether management includes a measure of harvesting. If native forests are planted, native wildlife will be attracted as will environmentalists in 30 years time if harvesting of some of the forest is part of the maintenance regime.

Geo-sequestration

From my brief research on injection of CO_2 into underground reservoirs, the infrastructure at the surface should not pose significant planning issues. However, the long-term impacts of securing a leak proof sub terrarium reservoir will need careful and confident discussion within the community. Given that CO_2 will be stored for a very long time, governments, NGOs, special interest groups and the community will need to be convinced that intergenerational equity has been addressed to the point of giving complete confidence on the technology. Hand in hand with intergenerational equity is the precautionary principle, which will require very a careful balance between the potential benefits and the community's apprehension about new technology.

Consultation

So, where to start with consultation.

Prior to a project reaching the public arena, a developer should have briefed government departments and local councils. It will invariably be the State or Federal Government who will issue the permit with input from councils impacted by the development.

And it is at the local government level that developers tap into the community. Developers may want to embark on their own consultation process. It has been my experience, however, local government can best facilitate that consultation and in fact, often are quite put-out if they are left out of the initial consultation process. Local government understands the community and consultation is the means by which local governments inform themselves of communities' attitudes and opinions. Engaging the community at this level tends to give a confidence to the community that they are part of the governance of the process and that those attitudes then become part of the review as planning proceeds. Planning and decision making only at the State of Federal level will inhibit good consultation because the community will perceive that decisions are being made at a remote level to their exclusion.

Close cooperation with councils therefore is essential. Developers are generally required to contribute to upgrading public infrastructure that is impacted by the development. In a project's early stages, in consultation with the council, the developer may wish to explore a range of public works that will, in essence, be what you might call "compensation" to the communities that suffer as a result of the development. I call them Community Enhancement Projects. A frequent claim by landowners is that property in the vicinity of major development that has an environmental impact will be devalued. A Community Enhancement Project can improve the amenity of the area to maintain values. That was certainly the case with the Cadia Ridgeway Gold Mine, a $600m open cut gold mine in the central tablelands of NSW, in a relatively closely settled agriculture area. Some consents have a property buy-out clause provided the landowner can demonstrate that a private property is adversely impacted by the development. That clause is predicated on the project not being able to keep within environmental levels set by the various permits.

In New South Wales, on mining related issues, local government is represented by the Association of Mining Related Councils. The Association represents more than 20 local government areas in which mining or mine related activities occurs and it takes an active role in community consultation committees. This organisation is well recognised by governments to speak on policy development and as an independent voice on mine related matters. It is however, unique to NSW.

The preparation and exhibition of an Environmental Impact Statement will, of course, bring forward many issues from governments, NGOs and the community group. However, with good prior consultation, and a sustainable project, the assessment process should be less onerous. The use of Commissions of Inquiry into major developments in NSW also provides further opportunity for community consultation and input.

Having clear legislation brings me to explore some of the peripheral matters relating to the process of sequestration that will be of vital interest to NGOs and communities.

I have had the experience of negotiating with a mining developer, a 30 km a gold concentrate pipeline and wastewater return line. Ultimately, it was determined the best location for the pipes was in the road reserve because it involved only one lease and one landlord, the Council. That proved easy. Not so easy was the construction of an above ground 132kv power line through city residential streets to service the mining development. Through public pressure, the energy supplier was forced to construct much of the power line underground through residential streets. Both planning tasks were canvassed in the public arena. The pipeline drew virtually no comment while the power line drew strong protest. I suspect it revolved to a fair degree around visibility of the infrastructure as a reminder of the emotion of high voltage transmission lines in proximity to residents. It just

highlights that, even with good community consultation, how essential it is to be confident on the technology being used.

In New South Wales, the State Government now requires, as a condition of consent for major developments where there is significant environmental impact, the establishment of a Community Consultation Committee, independently chaired. Carbon sequestration projects would, I believe, be subject to a similar condition. Committees are usually established at the commencement of the operational phase and comprise a representative from specific interest groups, the community, the local council, or councils where there is cross boundary impacts, and the developer. Held generally at 3 monthly intervals, the developer uses the Committee as a means of disseminating information as the project proceeds and takes on board for resolution, matters bought to the Committee by the community representatives and responds to complaints. Matters that cannot be resolved are referred to the Planning Minister.

Can I share with you two examples of how a project can become frustrated and the community galvanized against the project. These examples highlight the importance of having specific or clear legislation of the planning, construction and operation process of a development. Legislation should not give rise to differing interpretation by the developer and community groups.

In 2001, Figuarrdo, Reiner and Hertog from M.I.T, Massachusetts, reviewed, in a case study, an ocean carbon sequestration project, which was withdrawn following community pressure.

In 1997, an International Agreement was signed with much fanfare, at Kyoto for a collaborative study of direct injection of carbon dioxide into the deep ocean. A site was chosen off the big island of Hawaii. While it was intended to establish a public outreach program to engage the Hawaiian community, the public learned of the project through a newspaper article.

It would seem that the site was chosen after a comprehensive study and government permits were issued.

The principles adopted of engaging the local citizens to participate during the design and progress of the project was admirable. However, no funding was allocated to allow the process to commence.

And so began a battle with activists which included native Hawaiians and the fishing community. Government agencies came under pressure with the permit being rescinded. The project team did not anticipate preparing an Environmental Impact Statement which would have given the community an opportunity to assess from their perspective, the impact of the project. Ready to commence the trial, pressure was bought to bear on the US Government who insisted on the preparation of an EIS prior to commencement. That of course involved a long

time delay and while ultimately the EIS found no significant environmental impact, the climate of the community remained very hostile.

The project was withdrawn from Hawaii and contingency plans were prepared to locate the project in northern Europe.

I would endorse the views in the case study that community consultation must commence at the beginning of the project and be well resourced. Quoting the case study authors “The public can become fearful when new technology is not explained and skeptical when it appears that the public have been excluded from the decision making process.” Very true.

The other project example is a little closer to home. While the project does not involve sequestration it does involve legislation interpretaion and community skepticism related to gas extraction.

In NSW, a project to extract methane gas from coal beds caused a great deal of concern both from private residents and local government. The developer was given approval for the project under an Exploration Licence which did not require development consent involving community input. While the project was exhibited at the local council, the public had no legal rights of redress to the consent authority’s approval. The project was the first of its type and required a legislative amendment, which had the effect of permitting an operation opposed by sections of the community. As can often happen, activities carried out as exploration can cause significant environmental and social impacts. I believe the community had a right to contribute towards planning the project. Community relations have been restored but the process did cause unnecessary angst at a local level.

Conclusion

So in conclusion, Carbon sequestration is new relatively technology to the community. Having confident well-researched and sound principles is stating the obvious and a successful implementation will need to go beyond such principles. At the end of the day, its about managing impacts – working out ways to maximize the benefits for the development and for the community. Managing impacts includes developing programs, which will compensate for unavoidable effects on a community while balancing those programs with the need for the development to be environmentally and economically sustainable.

Appropriate legislation is also essential.

I would encourage any developer to gather around the project a consultation team with a passion for the environment, commitment, good communication skills and that is well resourced. That team, I would submit should be in place for the life of the project – from its commencement, through its formative and primary stages to its conclusion.

Thank you.